

REMARKS

A. Introduction

Applicants thank the examiner for the pursuit of compact prosecution of the current patent application as indicated in the various rejections and objections to the claims. In the interest of compact prosecution, the Applicants have made all amendments suggested by the examiner. In addition, a minor amendment has been made to independent claim 3 to more clearly distinguish the claimed invention from the cited prior art by loop-back mounting a simulated disk. Amendments were made to claim 27, *sua sponte*, to ensure that the same comports with the provisions of 35 U.S.C. 112, second paragraph. A feature that carries-out loop-back mounting is present in dependent claims, namely 18 and 27: a loop-back driver.

None of the cited prior art references teach loop-back mounting. As described in the specification: “loop-back mounting is the process of taking a file and presenting it as a physical disk to the operating system. The operating system is fooled into detecting what appears to be another physical disk, causing file system drivers within the operating system to attempt to detect and mount the file system(s), if present, residing on the disk. A special loop-back driver, belonging to a family of drivers called storage class drivers, provides the loop-back mechanism by presenting the abstraction of a disk to the operating system.” See ¶ [0152]. Contrary to the assertions made in the Office action, the cited prior art does not teach or suggest loop-back mounting a simulated disk, for the reasons discussed more fully below.

B. Restriction Requirement

In the Office action it was alleged that newly submitted 28-52 were directed to an invention that is independent or distinct from the invention originally claimed. Applicants have cancelled claims 28-52 to overcome the Restriction Requirement.

C. Claim Objections

In the Office action claims 5, 6, 18, 20 and 27 were objected to due to informalities. Appropriate amendments have been made. It is respectfully submitted that the aforementioned claims comport with the practices and procedures of the patent office.

No amendments made to the claims were necessitated by information material to the patentability of the same, prior art or otherwise.

D. Rejections under 35 U.S.C 112, second paragraph

In the Office action claims 16, 21-25, and 27 were rejected under 35 U.S.C 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended the aforementioned claims. It is respectfully submitted that all pending claims comport with the provisions of 35 U.S.C. 112, section paragraph. No amendments made to the claims were necessitated by information material to the patentability of the same, prior art or otherwise.

E. Rejections Under 35 U.S.C. section 102

1. Independent Claim 3

In the Office action independent claim 3 was rejected as allegedly being anticipated by United States patent number 6,477,624 to Kedem. As stated above, claim 3 has been amended to define a method for creating an image of a source disk of a first computer on a second computer that includes an operating system that has file system software including loop-back mounting a simulated source disk in the second computer so that the simulated source disk is accessible the operating system as a local disk. In the Office action it was alleged that Kedem teaches the inclusion of a network loopback driver by reference to column 1, lines 29-38. Upon review of the text, there is no teaching or suggestion of a loop back process and/or loop back driver. Reference is also made in the Office action to column 1, lines 53-62 in support of the assertion that Kedem teaches a loopback driver. That text is as follows:

WHEN THE PERSISITENT STORAGE DEVCIE IS A
HARD DISK, THE PERSISTENT STORAGE DEVICE
DATA IMAGE WILL FRERQUENTLY BE CALLED A
DISK IMAGE.

Upon review of the text, it is manifest that no mention is made to a loop back process and/or loop back driver. Moreover, it is the Applicants' position that the LDIM does not contain an image of a source disk. As stated in the text bridging column 11, line 62 to column 12, line 8 LDIM appears as a standard IDE disk drive to the host system CPU 302. Upon receiving a command from CPU 302, such as a read command, LDIM determines from which disk to retrieve the information and buffers the same in buffer 405 of LDIM. Thus, buffer 405 does not contain an image of either source disk 110 or 206. Moreover, Kedem does not mention that any of the remaining memory components of the LDIM the images of either source disk 110 or 206. Rather, the remaining memory modules are clearly indicated as include other information not consisting of an image of with source disk 110 and/or 206. See column 11, lines 16-61. From the foregoing description it is clear that LDIM does not contain an image of the source disk. Without containing an image of the source disk, it cannot be said that LDIM is loop back mounted as claimed. What is realized seen is that LDIM is not simply a file mounted as a pseudo-device. LDIM is, in fact, a physical device having multiple memory devices, both volatile and non-volatile that appears to be another physical disk. This is distinguishable from the presently claimed invention in which a file is presented as a physical disk to the operating system. See ¶ [0152]. Contrary to the assertions made in the Office action, there is no indication of loop-back mounting a simulated disk, for the reasons discussed more fully below. Based upon the forgoing Applicants respectfully contend that claim 3 is not anticipated by Kedem.

2. Claim 18

Claim 18 was rejected as allegedly being anticipated by United States patent number 6,477,624 to Kedem. Claim 18 defines a system for creating an image of a source disk in which contents of the source disk are arranged according to at least one source file system, comprising, *inter alia*, a second computer having a memory with an operating system and an imaging server residing therein, the imaging server including computer executable instructions having code to create a simulated source disk that is a

representation of information stored on the source disk and is accessed by the operating system as a local disk; and code to mount the simulated source disk in the second computer, with said memory including file system drivers to detect a file system of the simulated source disk and a network loopback driver intercepting sector-based I/O requests directed to the simulated source disk and retrieving source disk data from the source disk according to intercepted sector-based I/O requests intercepted by the network loopback driver, defining intercepted sector based I/O requests.

For the reasons mentioned above with respect to claim 3, Kedem does not teach a loopback driver. As a result, it is submitted that Kedem does not anticipate claim 18.

In addition, claim 18 recites additional features that distinguish the claimed invention from Kedem. Specifically, claim 18 includes computer executable instructions having code to create a simulated source disk that is a representation of information stored on the source disk and is accessed by the operating system as a local disk. Kedem does not mention, discuss or advocate that the LDIM containing any information representative of the data of the source disk. Moreover, as discussed above, the LDIM does not contain the images of either source disk 110 or 206. Rather any information that is to be transmitted to the devices of the host system is acquired from one of the source disks 110 or 206 and stored in a buffer 405 of LDIM. See column 11, line 62 to column 12, line 8. Thus, buffer 405 does not contain an image of either source disk 110 or 206. The remaining memory modules are clearly indicated as include other information not consisting of an image of with source disk 110 and/or 206. See column 11, lines 16-61. It is Applicants' position that this indicates that Kedem did not envision having the LDIM contain an image of either source disk 110 and or 206. As a result, it is submitted that Kedem does not anticipate claim 18.

F. Rejections Under 35 U.S.C. section 103

1. Claim 16

Claim 16 was rejected as allegedly being obvious over Kedem in view of United States patent number 5,991,542 to Han. Claim 16 defines a method for creating an image of a source disk of a first computer, in which contents of the source disk are arranged

according to at least one source file system that includes, *inter alia*, mediating, by the operating system of a second computer in which the simulated disk is present, sector-based I/O requests between the imaging client of the first computer and the source disk of the first computer.

Kedem does not teach controlling an imaging client in a computer in which the source data is maintained with the operating system of a second computer in which the simulated disk is present. To do so would destroy the intended function of Kedem: to completely decouple a persistent storage device data image seen by the computer from a persistent storage device. See column 3, line 34-37. To that end, Kedem teaches that it is the LDIM and not the operating system of the computer in which the LDIM is present that communicates with the persistent storage device. See column 8, lines 28-33; column 9, lines 28-47. As a result, it is LDIM that undertakes communicating with the source data and not the operating system.

Moreover, none of the cited prior art references overcome the deficiencies of Kedem. Therefore, it is respectfully contended that a *prima facie* case of obviousness is not present with respect to claim 16.

2. Claim 27

Claim 27 defines a system for creating an image of a source disk of a first computer, which has a memory and in which contents of the source disk are arranged according to at least one source file system that includes several features not present in the cited prior art, such as follows

(a) a network loopback driver intercepting sector-based I/O requests directed to the simulated source disk.

As set forth above with respect to claim 3, the present invention employs a loop-back mounting method that uses a loop back driver to present an abstraction/ image, of a disk to the operating system. See ¶ [0152]. To that end, the simulated source disk would require an image of the source disk in order to achieve this function. It is the Applicants' position that the LDIM does not contain an image of a source disk. As stated in the text bridging column 11, line 62 to column 12, line 8 LDIM appears as a standard IDE disk

drive to the host system CPU 302. Upon receiving a command from CPU 302, such as a read command, LDIM determines from which disk to retrieve the information and buffers the same in buffer 405 of LDIM. Thus, buffer 405 does not contain an image of either source disk 110 or 206. Moreover, Kedem does not mention that any of the remaining memory components of the LDIM contain images of either source disk 110 or 206. Rather, the remaining memory modules are clearly indicated as including other information not consisting of an image of source disk 110 and/or 206. See column 11, lines 16-61. It is Applicants' position that this indicates that Kedem did not envision having the LDIM contain an image of either source disk 110 and or 206. As a result, it is submitted that Kedem does not teach having an image of the source disk in LDIM. Without an image of the source disk there is no reason to have a loop back driver.

Moreover, none of the remaining cited prior art references overcome the deficiencies of Kedem. Therefore Applicants respectfully contend that a *prima facie* case of obviousness is not present with respect to claim 27.

(b) a simulated destination disk generated by mounting the destination image in an uninitialized state in the second computer.

Kedem is also completely silent with respect to a simulated destination disk being generated by mounting the destination image in an uninitialized state in the second computer. Assuming, *arguendo*, that the LPSD 110 may be considered a simulated destination disk, when LDIM writes thereto, see column 9, lines 39-47. However, the destination image is not generated by mounting the same in an uninitialized state in the second computer. Rather, the LPSD 110 is a disk that is already mounted to the computer system when LDIM undertakes a write operation thereto. As a result, it is submitted that Kedem does not teach generating a simulated destination disk by mounting the destination image in an uninitialized state in the second computer.

Moreover, none of the remaining cited prior art references overcome the deficiencies of Kedem. Therefore Applicants respectfully contend that a *prima facie* case of obviousness is not present with respect to claim 27.

(c) a local loopback driver intercepting sector-based I/O requests directed to the simulated destination disk and retrieving partition and file system layout information from the source disk.

The arguments set forth above with respect to the loop back driver feature apply with equal weight here in support of the contention that cited prior art do not teach or suggest a local loop back driver. Therefore Applicants respectfully contend that a *prima facie* case of obviousness is not present with respect to claim 27.

(d) a formatting module comprising computer-executable instructions for formatting the destination image to have the same partitioning and file system as the simulated source disk and thus of the source disk.

The arguments set forth above with respect to the simulated destination disk features apply with equal weight here in support of the contention that cited prior art do not teach or suggest a formatting module, as claimed. Therefore Applicants respectfully contend that a *prima facie* case of obviousness is not present with respect to claim 27.

H. Dependent Claims

Considering the dependent claims include all of the features of the independent claims from which they depend, these dependent claims are patentable to the extent that the independent claims are patentable. As a result, Applicants respectfully contend that a *prima facie* case of neither anticipation nor obviousness is present with respect to the dependent claims for the reasons set forth above with respect to the independent claims.

CONCLUSION

Applicants have, by way of the amendments and remarks presented herein address all issues that were raised in the outstanding Office Action. Applicants respectfully contend that this Amendment has overcome the rejections and that the pending claims are in condition for allowance. If it's determined that a telephone conversation would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-2652** referencing docket no. A28. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

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